



# IKC UPDATE

A Quarterly Publication of The Indiana Karst Conservancy  
December 2014  
Number 115



# INDIANA KARST CONSERVANCY, INC

PO Box 2401, Indianapolis, IN 46206-2401

[ikc.caves.org](http://ikc.caves.org)

Affiliated with the National Speleological Society



The Indiana Karst Conservancy is a non-profit organization dedicated to the conservation and preservation of caves and karst features in Indiana and other areas of the world. The Conservancy encourages research and promotes education related to karst and its proper, environmentally compatible use.

## EXECUTIVE BOARD

President  
Jerry Lewis (2015)  
(812) 967-7592  
[LewisBioConsult@aol.com](mailto:LewisBioConsult@aol.com)

Secretary  
Kevin Smith (2015)  
(317) 856-0500  
[FreeWheeler2Go@yahoo.com](mailto:FreeWheeler2Go@yahoo.com)

Treasurer  
Keith Dunlap (2015)  
(317) 882-5420  
[Keith.Dunlap@juno.com](mailto:Keith.Dunlap@juno.com)

Directors  
Bruce Bowman (2017)  
(317) 539-2753  
[Bruce.Bowman@tds.net](mailto:Bruce.Bowman@tds.net)

Christopher Dick (2015)  
(812) 988-8221  
[Espresso0000@yahoo.com](mailto:Espresso0000@yahoo.com)

Dave Haun (2015)  
(317) 517-0795  
[DEHcave@onet.net](mailto:DEHcave@onet.net)

Everett Pulliam (2016)  
(317) 745-7816  
[SpeleoRat@aol.com](mailto:SpeleoRat@aol.com)

Bob Sergesketter (2017)  
(812) 482-5517  
[CableBob@insightbb.com](mailto:CableBob@insightbb.com)

Bruce Silvers (2016)  
(260) 456-8562  
[BruceSilvers@frontier.com](mailto:BruceSilvers@frontier.com)

Karen Silvers (2015)  
(260) 249-0924  
[BentBat@hotmail.com](mailto:BentBat@hotmail.com)

Tom Sollman (2015)  
(812) 753-4953  
[Sollman@juno.com](mailto:Sollman@juno.com)

Carla Striegel-Winner (2016)  
(812) 367-1602  
[CarlaStriegel@gmail.com](mailto:CarlaStriegel@gmail.com)

Bob Vandeventer (2017)  
(317) 888-4501  
[VandeventerBob@gmail.com](mailto:VandeventerBob@gmail.com)

Richard Vernier (2017)  
(812) 385-5058  
[rsavcaver2@gmail.com](mailto:rsavcaver2@gmail.com)

Jamie Winner (2016)  
(812) 367-1602  
[JAWinner@gmail.com](mailto:JAWinner@gmail.com)

## COMMITTEES / CHAIRPERSON

Education/Outreach  
Don Ingle  
(see E-Board list)

Web Technologies  
Bruce Bowman  
(see E-Board list)

IKC Update Editor/Publisher  
Keith Dunlap  
(see E-Board list)

Hoosier National Forest  
Jerry Lewis  
(see E-board list)

Buddha Property Manager  
George Cesnik  
(812) 339-2143  
[GeoCesnik@yahoo.com](mailto:GeoCesnik@yahoo.com)

Orangeville Rise Property Manager  
Steve Lockwood  
(812) 944-8097  
[sknalockwood@yahoo.com](mailto:sknalockwood@yahoo.com)

Robinson Ladder Property Manager  
John Benton  
(812) 389-2248  
[JMBenton1952@gmail.com](mailto:JMBenton1952@gmail.com)

Shawnee Property Manager  
Jerry Lewis  
(see E-board list)

Sullivan Property Manager  
Keith Dunlap  
(see E-Board list)

Wayne Property Manager  
Robert Sollman  
(812) 753-4953  
[BobSollman@gmail.com](mailto:BobSollman@gmail.com)

Indian Creek CE Monitor  
Jamie Winner  
(see E-board list)

## GROTTOES & LIAISONS

Bloomington Indiana Grotto\*  
Dave Everton  
(812) 824-4380

Central Indiana Grotto\*  
Keith Dunlap  
(317) 882-5420

Dayton Underground Grotto  
Mike Hood  
(937) 252-2978

Eastern Indiana Grotto  
Brian Leavell  
(765) 552-7619

Evansville Metro Grotto\*  
Steve Weinzapfel  
(812) 4630-7995

Harrison-Crawford Grotto  
Dave Black  
(812) 951-3886

Louisville Grotto\*  
Susan Wilkinson  
(317) 910-8023

Near Normal Grotto\*  
Ralph Sawyer  
(309) 822-0109

Northern Indiana Grotto\*  
Jennifer Pelter  
(260) 456-3374

St Joseph Valley Grotto\*  
Joy Baiz  
(574) 286-9404

Sub-Urban Chicago Grotto  
Gary Gibula  
(630) 393-6746

Windy City Grotto  
Jack Wood  
(773) 728-9773

\*grottos with liaison agreements

## MANAGED CAVES / PATRONS

Buddha Cave  
Jeff Cody  
(317) 888-9898  
[codyjpme@att.net](mailto:codyjpme@att.net)

Robinson Ladder Cave  
John Benton  
(830) 305-1026  
[JMBenton1952@gmail.com](mailto:JMBenton1952@gmail.com)

Shiloh Cave  
James Adams  
(317) 945-8604  
[JKAdams@aol.com](mailto:JKAdams@aol.com)

Suicide Cave  
Ronnie Burns  
(812) 883-7400  
[RonLiz1998@gmail.com](mailto:RonLiz1998@gmail.com)

Sullivan Cave  
Anthony Owens  
(812) 322-7359  
[SullivanCave@gmail.com](mailto:SullivanCave@gmail.com)

Upper Twin Cave  
Dave Everton  
(812) 824-4380  
[DEverton@indiana.edu](mailto:DEverton@indiana.edu)

Wayne Cave  
Dave Everton  
(812) 824-4380  
[DEverton@indiana.edu](mailto:DEverton@indiana.edu)

Cover: Bob Armstrong in the third formation room of the RPI Discovery in Wayne Cave, circa 1957. Photo by Don Martin (also cover photo of the *NSS News*).



**QUARTERLY MEETING REMINDER**  
**SATURDAY, DECEMBER 13th, 11:00 AM EST**  
**BLOOMINGTON, INDIANA**  
**MONROE COUNTY PUBLIC LIBRARY**

The quarterly meetings are for the Executive Board to conduct business, and for our members and other interested persons to have an open forum to talk about caves and karst conservation and related topics. Past, present, and future IKC projects are discussed to solicit comments and input from our members and the caving community as a whole. The meetings are informal, and everyone is encouraged to attend and participate. The IKC Board wants your input.

**Preliminary Agenda Items:** Summary of Fall work activities; Robinson Ladder prairie options; Wayne Cave Preserve expansion, kiosk, and Management Plan discussion; Suicide Cave Patron; Land acquisition activities; Financial reports; and more...

**Directions to the meeting location:** The Main Library is located in downtown Bloomington at 303 E Kirkwood Avenue between Lincoln and Grant Streets. The parking lot is accessible from 6th Street. If you are travelling northbound on Walnut street, turn right on either Kirkwood or Sixth Street and go east two blocks. If you are traveling southbound on College Avenue, turn left on either Sixth Street or Kirkwood Avenue and go east three blocks.



**ACTIVITIES CALENDAR**

**Dec 13 – IKC Quarterly Meeting @ 11 AM in Bloomington (see above)**

**Mar ?? – IKC Annual Business Meeting (date & location to be determined)**

**Apr ?? – Under-Earth Day (date & location to be determined)**

**Apr ?? – Indiana Cave Symposium (date & location to be determined)**

For more information on the Indiana Karst Conservancy, visit our website at [ikc.caves.org](http://ikc.caves.org) or write to our PO box. Membership to the IKC is open to anyone or any organization interested in supporting cave and karst conservation. Annual dues are \$15. Please see inside the back cover for a membership application form or to make a much-appreciated donation. Donations can also be made by credit card using the donation button located on our website's home page.

The IKC Update, distributed for free, is published quarterly for members and other interested parties. The purpose of this newsletter is to keep the membership and caving community informed of IKC activities and other news related to cave/karst conservation. Submission of original or reprinted articles for publication is encouraged.

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## RAMBLINGS FROM THE PRESIDENT...

Partnerships. It's said that no man is an island and I think this would extend to organizations as well. I'm taking this opportunity to ramble on thoughts concerning The Nature Conservancy (TNC). For those of you who aren't familiar with it, TNC is the largest conservation organization in the world. Although anyone exploring natural areas in the United States is likely familiar with TNC, it is in fact an organization whose activities span the globe. Here at home in the Midwest, you're likely to find yourself on a TNC property if you wander the countryside frequently. For example, here's a Facebook post concerning a visit to a natural bridge by IKC members Dick and Sue Vernier from last week: *"Mantle Rock Preserve is a hidden gem in a remote part of western Kentucky. Owned and managed by The Nature Conservancy, the preserve includes a 30 foot high, 188 foot long natural freestanding arch...."* The Vernier's post caught my eye not only because of the beauty of the site, but the fact that it was yet another TNC property.

I've been involved with The Nature Conservancy since back in the 1990's... Salisa and I are card-carrying members. My biological consulting company, a small family-owned business, has conducted a lot of work with TNC and I think this work paved the path that led me to being president of the Indiana Karst Conservancy. It's not a tremendous leap between developing business connections with

conservation organizations and then utilizing those same connections to further the goals of the IKC.

Let me give an example of how my business and IKC relationships have intermingled. When I go grocery shopping, I don't just walk into Kroger and start buying stuff... I have a list. The Nature Conservancy does the same thing... it has a shopping list. The difference between the two shopping trips is one of scope, in that at the grocery I need bread, milk, and cat food (for the cat) to get through the next week. My idea of long term planning is a 12-pack of toilet paper. TNC on the other hand is shopping for the long haul... and like everyone else, has to conduct business with finite resources. The TNC shopping list takes the form of their list of "portfolio sites", which is to say, the list of sites that protect the broadest swathes of our natural heritage. Sites with assemblages of rare species are given priority status for acquisition, with the underlying assumption that for every rare species protected within a protected site, there are going to be a lot of more common ones that are afforded positive protection as well.

So where does The Nature Conservancy get its shopping lists? For their subterranean list, the path leads back to me. I've been visiting Indiana caves for 43 years – how time flies – and I've sampled the fauna in over 600 caves in our state. About 15 years ago I prepared the

first list of priority cave sites for conservation in Indiana. As more information accumulated, and our understanding of some of the species changed, the priorities have shifted, and I re-visit the portfolio list periodically to make revisions.

And what does that have to do with the IKC? We're constantly on the lookout for additional cave properties to buy, and when the Upper Twin Cave property became avail



TNC trip into Upper Twin Cave, from left to right, Jerry Lewis, Chad Bladow, Jesse Moore, Beth Mizell, Jennifer Franer, and Salisa Lewis (photo by Dave Everton).





able I recognized immediately that it was on the TNC portfolio list. Thus, TNC partnered with the IKC for the acquisition, contributing half of the initial \$102,000 for the land. It's a win/win situation, in that the IKC received a significant financial contribution toward purchasing the property, while TNC benefits from the knowledge that another one of their portfolio sites is in the hands

of a conservation organization that will provide good stewardship.

Later in this issue (see page 8), I'll describe a recent "Open House" that the IKC hosted for TNC at the Shawnee Karst Preserve, but suffice it to say, the partnership continues and believe each partner is better for it.

*Jerry Lewis*

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## NEWS BRIEFS..

- ❑ A reminder to our members (and other cavers) that the IKC's agreement with Spring Mill State Park allows through-trips in Upper Twin Cave from November 1st to May 15th and through-trips in Donaldson/Bronson year around. Trips must be arranged through Dave Everton, the Access Coordinator, and all participants must complete a short training course on White-nose Syndrome and the proper decontamination protocols.
- ❑ The IKC's initial experiment with planting hybrid chestnut trees at three of our preserves seem to have been a success with 19 of the 20 trees surviving and thriving the first summer, thanks to the ideal growing season. The real test will be to see how many withstand the winter and leaf out in the spring. We may decide to plant more chestnuts in 2016.

- ❑ At the June IKC meeting, the Board approved the purchase and installation of a pond liner for a second, smaller pond at the Shawnee Karst Preserve. Jerry and Salisa Lewis got the new liner installed and recent rains have created the pond, ready for the frogs and other wildlife next spring.



- ❑ The Hoosier National Forest has expanded by purchasing three tracts in 2014. The most notable was the 300+ acre Blanton tract in Orange County containing two of the four entrance to the Lost River Cave System (the HNF now owns all four entrances). Nearby, the HNF acquired a 120-acre tract formally owned by Kimball Industries. This tract contains several small caves and interesting karst features. The third tract acquired was at the north end of Lake Monroe and could potentially contain some karst features. The HNF now comprises of 203,343 acres.
- ❑ Indianapolis Monthly magazine in October printed a very interesting human interest story on Indiana caver Tim McLain who passed away last year: [www.indianapolismonthly.com/news-opinion/into-the-darkness-inside-indiana-caves](http://www.indianapolismonthly.com/news-opinion/into-the-darkness-inside-indiana-caves).
- ❑ The end of the year is near, so it would be a perfect time to make a tax-deductible donation to the IKC. Donations directed toward our general fund will be used for promoting our educational initiatives and to fund our many stewardship activities at our six existing preserves. Donations can also be specified for our Cave Acquisition Fund, and be used towards our next cave/preserve purchase. You can mail the donation to our PO Box address (see page 2) or make a credit card donation at [ikc.caves.org](http://ikc.caves.org).
- ❑ The IKC has gained four new members in the last quarter. Welcome Richard Lunseth (550), Shelly Wolf (551), Ray Long (552) and the Davis Family (553). The IKC membership currently stands at 184.

## WAYNE CAVE PRESERVE'S NEW KIOSK

*text and photos by Keith Dunlap*

It has been a goal of the IKC to erect a professional looking information kiosk at each of our preserves. The kiosks would provide signage that included history and description of the property and cave as appropriate, visitation rules, and a list of the donors who made the acquisition possible. Unfortunately, up to this point, only the kiosk at the Buddha Karst Preserve had been completed.

That said, Robert and Tom Sollman have made significant progress on a "kiosk" at the Wayne Cave Preserve. I put "kiosk" in quotes because the structure they designed and constructed is more of a walk through shelter that will eventually feature two large four-foot by eight-foot display panels.

Words can not really do the kiosk justice,

but the accompanying photos help to show off the timber frame structure's craftsmanship. The four vertical columns are ten-inch square by eight-foot tall rough-cut cedar custom milled by IKC member Richard "Fig" Newton. Most of the other structural beams are six-inch square cedar held together by over twenty-six feet of half-inch all-thread. Tom fabricated dozens of custom brackets and a very interesting stainless-steel ring assembly for the cross-rod supports. Tom and Robert spent much of the summer cutting and fitting the framing at their home, then disassembled the structure to transport it to the Wayne Preserve in October.

Four foundation pads were dug and poured





with concrete and rebar to provide a level base and more custom brackets were fabricated to elevate the columns off the concrete. The final construction of the kiosk took three days with Keith Dunlap assisting Robert and Tom. It basically took a day to re-assembly the timber frame, a day to fabricate the roof using two-by-six inch tongue-and-groove treated lumber covered by Ondura® corrugated roofing panels, and a day to install the two large display frames and corresponding seating benches. There is easily over two hundred man-hours thus far in the project.

Tom is currently researching the history of the cave and hopes to have a draft description completed by spring. A large map of the cave is also envisioned, along with the donor's list and visitation rules. Tom has already applied three gallons of boiled linseed oil to the cedar beams and plans are to stain the non-cedar lumber next spring to

give everything a more rustic appearance. We also hope to finish out the kiosk with an antique brick floor or concrete pavers.



## WAYNE CAVE PRESERVE EXPANDED

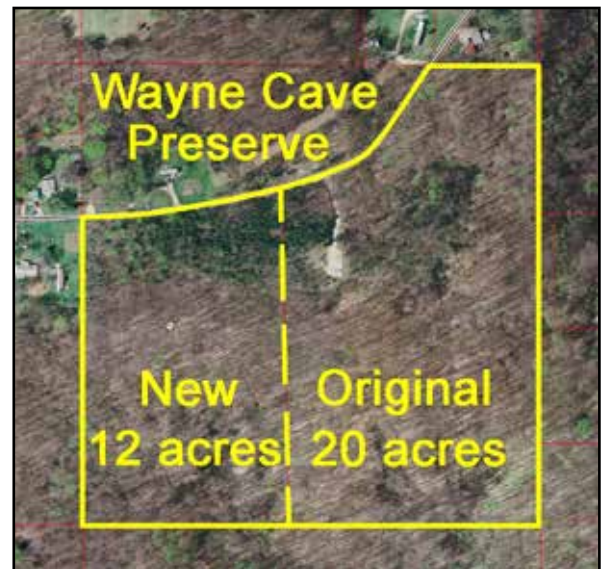
*by Keith Dunlap*

On Oct 31, the IKC's Wayne Cave Preserve grew from 20 acres to almost 32 acres, thanks to a donation by Keith Dunlap who owned the adjacent 12-acre tract. The expansion had always been intended, the only question was how it would eventually occur.

For those who may not know, the IKC has managed access to Wayne Cave for the landowner since 1985 (actually before the IKC was incorporated). When the 32-acre property was listed in 2003, the IKC was interested, but the \$118,500 price tag was more than the IKC could afford at the time. To facilitate the deal, the IKC agreed to buy 20 acres while Dunlap would buy the remainder, splitting the purchase price proportionally.

In 2010, an opportunity arose to place mitigation easements on the two properties in exchange for monetary compensation that actually exceeded the original purchase amounts. While the IKC later declined the easement proposal due to some over-reaching language in the final easement document, Dunlap was able to negotiate out the offending language and accepted the offer on his tract.

The easement significantly limited how the 12-acre tract could be used since no development or timbering could occur, making the property undesirable to most future owners. However, these restrictions are not major impediments to the IKC and the added acres provides a larger natural area for



hiking/exploring, protects more of the surface over Wayne Cave, and add one small pit cave and several interesting karst features to the IKC portfolio.

To accept and transfer the donated property, the IKC spent a little under \$400 for deed/title work and a title insurance policy. Since the expansion property was already enrolled in Classified Forest, property taxes are capped at \$5/year and liability insurance will add another \$8/year. Other than some occasional monitoring and invasive plant control, the expansion should take minimal additional effort to own.

## SHAWNEE KARST PRESERVE OPEN HOUSE

by Jerry Lewis

“Welcome to Upper Twin Cave,”... I said as another person slithered through the small hole in the base of the sinkhole that constitutes the IKC entrance to the cave system. That day – October 31, 2014 – Salisa and I had met Keith Dunlap and Dave Everton to host an “open house” for staff of The Nature Conservancy (TNC). The idea had been hatched a year or so earlier during a day I spent hiking the fifty acre property by Allen Pursell. As noted in my Rambling (page 4), TNC assisted the IKC in purchasing the Shawnee Karst Preserve, so it seemed appropriate to extend an invitation to tour the property and see the cave as a “thank you” to our conservation partners.

Now the day had come... wet, cold and dreary. Salisa and I chatted with Keith and Dave for a few minutes (who were remaining on the surface to meet and greet the TNC attendees) and then we entered the cave an hour before the group to make some preparations. We were offering two different tours of the cave that day. For the group not wanting to commit to the rigors of a cave with neck-deep water, Keith was going to lead a short trip into the entrance area. Salisa and I brought a net and two buckets and intended to catch some animals for the entrance area tour to see.

Crawling on hands-and-knees along the gravel bar at the edge of the stream, a cavefish (*Amblyopsis hoosieri*) was easy to find... there was one lingering in the first deep pool only fifty feet or so downstream from where we had entered the stream passage. I netted it and a moment later Salisa was there with a five gallon bucket in which to put it. She immediately started the task of gently transporting the fish through the crawlway back to the entrance room. I also wanted to find a cave crayfish (*Orconectes inermis*) and finally spotted a large adult lingering on the floor of the pool in water about five feet deep. It was difficult to see because of the mud I'd stirred up entering the pool, but after a few minutes I was successful in capturing it. I put the crayfish in another bucket and started lugging it and the nets back to the entrance room.

We put the buckets holding the critters on a breakdown boulder next to the stream at the spot where one climbs out to go back up to the entrance room. We had a few minutes before the rest of our group entered the cave, so I looked around the entrance room for things to show when they arrived.

I found a tiny cave spider, merely two millimeters in length, and placed it in a vial for future reference.

After a few minutes we heard scuffling on the surface and then our TNC guests started emerging through the entrance hole. We welcomed each newcomer and directed them to “pull up a rock” and take a seat. Eventually we had a dozen people sitting around in the dim twilight of the entrance room. I introduced our four IKC hosts and then talked for a few minutes about the cave system and some of its inhabitants. I passed around the vial containing the spider and asked everyone to



photo courtesy Dave Everton, 2014

pick up a piece of breakdown... most of the stones had a tiny silk egg case deposited by one of the spiders. I also pointed out the pinkish-orange Herald moths as well as a few mosquitos that were also over-wintering in the cave entrance.

I asked if anyone had any questions and an obvious concern was voiced... “it’s raining on the surface... do we need to worry about the cave stream rising?” I answered that the question was indeed relevant, as well as an indication that the person asking understood the dynamic nature of karst. All of the rainwater falling on the surface would be channeled into underground passages, and we happened to be sitting in one of them. I went on to say that one of the other reasons we had entered the cave before them was to assess the water level. It had rained three days prior, and I was pleased to report that the waterlines on the rocks near the stream indicated that the water had risen and fallen about eight inches. I judged that the water was back to base flow, so we were good to go,





despite the drizzle occurring on the surface.

At that point we divided into two groups. Dave, Salisa and I would take four TNC participants on a through trip to the entrance at the boat landing in Spring Mill State Park. Keith remained with the rest of the group to look at the cave animals in the buckets and explore the drier passages around the entrance. For everyone, it was a rare opportunity to closely examine a live cavefish and cave crayfish... and then Keith returned them to the cave stream unharmed.

I led our group across the gravel bar crawlway to the edge of the first pool, turned around to see if everyone was doing okay, and then headed into the water. Everyone was wearing a wetsuit and there were exclamations from the first-time cavers as their wetsuits filled with fifty-four degree water. After passing through the first pool we emerged into a breakdown room that afforded more good looks at cavefish and crayfish in their native habitat. Dave took the opportunity to take a group photo (see page 4). I pointed out the large breakdown block spanning the room and that brought on questions about how long ago it had fallen from the ceiling. I suggested that it had probably been many thousands of years and that the chances that a rock would fall on its own that day was remote. Dave quantified my guesstimate by saying that bones from Pleistocene mammals dating to a time over 30,000 years ago were lying above the breakdown in Indiana Caverns.

Heading downstream I recognized the next pool as a spot where I would barely be able to touch bottom. As I floated in the pool I told the group "if you weren't baptized in the last pool, you will be now," then heard confirming moans and shrieks. Dave then purposely asked, "Do you know if there are any big rooms in the cave"... as I climbed out of the far side of the pool and exclaimed "look... a Big Room" and entered the largest room in the cave. As everyone climbed out of the water we paused to look at a turtle sitting on the edge of the stream. There was some discussion about rescuing the turtle from the cave, but Salisa noted that for the moment it was probably as happy in the warmth of the cave as it would be on the bottom of a frozen pond... and that it was part of the food web of the cave, destined to eventually become a source of meals for the trogllobites.

Standing in the Big Room I pointed out the clay-filled upper levels on both ends of the room that had merged with the lower stream passage at this point in the cave to form the largest room. We then headed back into the stream and floated

through the low arched exit from the room that is the lowest spot remaining between there and the downstream entrance. Cavefish continued to swim around me, but I noticed that I was stirring up enough mud that it was probably making it hard to see the fish for those following me. Dave and Salisa have seen lots of cavefish, so I gathered the group onto the next mudbank and suggested that the new TNC cavers take the lead so that they could see the fish in clear water. They asked how to know the way and I suggested that as long as they followed the flowing water downstream they'd get to the other entrance.

Predictably, the passage divided and they followed the water through a lower air space. There was a larger bypass that Dave, Salisa, and I took by crawling over a mudbank, and as the others emerged from the smaller water-filled passage they looked puzzled to see we were already in front of them again. Beyond there, the trip through the cave was fairly predictable... deep pools followed by stretches of gravel bars, over and over. After a while there was a bit of a commotion ahead and I caught up with our four new cavers to find that one of them had cupped hands under a cavefish and were taking photos of it with glee. It was a defining moment in the trip as our four new cavers, standing in wetsuits in waist deep water in the depths of the cave, marveling at a rare cave animal that few people will ever have the opportunity to experience. That moment made the trip for me.

We headed onward and the cave seemed to be gradually becoming larger. Eventually we reached a spot where two plastic jugs were hanging by strings from projections, marked "Turn Around". I explained that this was the temporary means of marking the turn-around point in the cave to keep cavers entering from the IKC entrance from straying into the DNR boat tours during the summer months. I told everyone that we needed to pause for a few minutes while we did a chore, while Salisa was pulling a long piece of string from the pocket of her coveralls. Keith had previously installed eye bolts on either side of the passage for the attachment of a more permanent marker than the jugs, and we needed to stretch the string between the bolts to get an accurate measurement of the amount of cable needed to suspend a sign.

After that we continued downstream in the large walking height passage and after a few hundred feet encountered a red plastic sign attached to the passage wall saying something to the effect of "You are now entering Spring Mill State Park property,

*Continued on page 11..*

## A LOOK BACK AT INDIANA KARST

by John M Benton

The following is a letter that was sent to former Indiana State Geologist W.S. Blatchley. It originally appeared in *Indiana Caves And Their Fauna*, published in 1897 in Indianapolis by Department of Geology and Natural Resources. The incident described happened in 1819; bears probably disappeared from Indiana not long after. Several Indiana caves still contain bear wallows (places where bears would sleep or hang out) to this day such as Suicide Cave (Washington County), Dillon Cave (Orange County), and Binkley Cave/Blowing Hole section (Harrison County). The cave described is probably Eller Cave in Monroe County. Anyone know if bear wallows are visible there today?

(WARNING—Graphic Descriptions!)

Greencastle, Indiana  
July 16, 1896

Prof. W.S. Blatchley,  
Indianapolis, Indiana

Dear Sir – I see from the papers that you, in company with other scientists, are contemplating making another trip of exploration to the caves of southern Indiana.

I feel interested in the exploration and description of a cave about five miles southwest of Bloomington, Monroe County, and have often thought I would sometime visit, but I am now too old. My reasons for feeling anxious to see or have a correct description of the cave are these: There was quite an exciting circumstance took place in that cave in which my father, Samuel Hazelett, was a party. My father, in 1818, moved from Jackson County and settled in Monroe County, where I was born October 2, 1819, nearly 70 years ago. In those days most men hunted and killed wild game more or less, and some were called “hunters” from the fact that they did little else but hunt for a living. One of these was James Wood. He could not write his own name but preached and hunted. He was out hunt-



ing one day when there was a “skilt” of snow on the ground and he struck the trail of a bear which he followed to this cave. He thought he would not be beaten, so he went and got my father, who was rather more a farmer than a hunter, and William Smith and Henry Wood, who were considered hunters. They all resolved to go into the cave after the bear, and prepared themselves by taking their guns, shot pouches, butcher knives, and flints and steels to make fire. They made also two sluts about as big and long as a man’s arm. I reckon you don’t know what a slut is. It is made by taking a large wick of some kind of cotton goods and squeezing tallow around the wick until the desired size is obtained. Then they started for the cave, and lit one of the sluts when they started in. After going in some distance they came to where the cave divided, one passage going to the left and the other to the right. There they lighted the other slut and placed it on the dividing point so that if they should get lost and get back there they would know where they were. They then took one of the passages, and after traveling some distance they came to quite a room with high ceiling and the floor about six feet lower than the passage. They went in on shelving rocks projecting over the floor around the edges of the room. These rocks allowed a man to squeeze around on about a level with the entrance without going down on the floor. They finally spied a bear at the opposite side of the room lying under the shelving rocks. My father took the slut and crawled around on these shelving rocks until he got over the bear so as to give James Wood a good chance to draw a bead on the bear. As Wood was considered the best hunter he did the shooting. At the crack of the gun the concussion knocked the light out, and there they were with a wounded bear in darkness they could almost feel. They had to grope their way back to where they had left the other slut burning. Father was the hindmost one getting back. He afterward said he felt like the bear was just behind him all the way.

After consulting for awhile, they concluded best not to go back into the cave where there





was a wounded bear, so they took the other branch of the cave, and after traveling some distance they came to another room somewhat similar to the first one, only larger. They got down on the floor of this, and after getting pretty well across it they discovered another bear. He sneaked around as though he wanted to avoid trouble, but that did not meet the hunters' views, so Wood fired on him and wounded him just enough to enrage him. He came tearing at them, and they all broke for the outlet. Henry Wood stepped into a hole and fell down. The bear ran over him, and as he did so gathered up Wood's gun in his mouth and slashed it around as if he were to break it into pieces. Henry Wood cried out, for God's sake, not to leave him. With that, father stopped and stayed with him. He said he would not have left him then if the bear had eaten them both up. James Wood and Smith both got up on the declivity, and as the bear made a rush to get out Wood gave him another fire that turned him, and as he came back father fired on him and that turned him. Thus they kept him going back and forth, Smith loading for Wood and H. Wood loading for father, until the bears' head was in a jelly; but he had gotten too mad to die. Finally, H. Wood got a chance to get out and left father alone, and he got back and laid down and crept under the ledge of rock as far as he could, pretending to be

dead as much as possible, as he had always heard that a bear would not disturb a dead man. The bear came and put his nose to the back of father's neck and opened his mouth and let about a quart of blood run down his neck. He said he thought then that his turn had come, but the bear laid down against him without further molestation, only breathing his stinking breath where father had to breathe it. Hostilities had to cease until the bear saw proper to get up, which he did when he got ready. Then they soon dispatched him. His head was shot into a jelly. They skinned and quartered him, each one taking a quarter, and left the cave forever. They built up a fire and watched till day for the other bear to come out, but when day came they found by the tracks in the snow that he had come out and left. They then went to a neighbor who kept a pack of dogs, and got them and put them on the trail of the bear. They tracked him but a few miles until they found the bear dead, so they got them both.

I have never heard of the cave being further explored. The knowledge of it in the neighborhood may be very limited, as father moved from there to this place in 1824, and I suppose all the old settlers are dead or moved away.

Yours Truly,  
R.M. Hazelett

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*Continued from page 9...*

please contact the park office." That was met with some humor as we looked around for the phone to contact the office. Failing that, we thought it sufficed that we had arranged for the trip a couple of months prior and continued onward. Soon we started encountering deep mud and I explained that it was sedimentation caused by the ponding of the water by the dam that made the downstream end of the cave navigable for the park's boat tour.

We started to see more over-wintering flies, and several frogs were found sitting on mud-banks. And then I saw that the folks ahead of us were taking photos looking out the scenic downstream entrance. Bringing up the rear, I emerged into the bleary gray day... the new cavers were starting to tell our greeting party (Keith, and the others who drove over) about their many adventures on their two hour and fifteen minute trip between the two entrances.

At the beginning of the day I told the group that this was going to be a trip they would tell their grandchildren about. I believe that for non-cavers an af-

ternoon spent swimming through a cave with dozens of cavefish intermingling with them qualifies as a memorable experience. This was a great way for some of our partners at TNC to "get up close and personal" and literally immersed in a very tangible way with the mission of the IKC... there's an immense gap between reading about Upper Twin Cave being inhabited by cavefish, and actually having a cavefish swim just inches away. I hope that the experience was as positive for our guests as it was for us, and that it serves as a great milestone along a productive pathway of partnership between the Indiana Karst Conservancy and The Nature Conservancy.

TNC participants included: Joe Tutterrow, Director of Protection; Adam McLane, Director of Operations and Strategic Engagement; Allen Pursell, Southern Indiana Program Director; Chad Bladow, Southern Indiana Director of Stewardship; Cristi Hall, Operations Coordinator; Jennifer Franer, Philanthropy Program Specialist; Jesse Moore, Preserve Steward; and Beth Mizell, Preserve Steward.

## IN MEMORY OF ROBERT (BUGS) ARMSTRONG

by Sam Frushour

Robert R (Bugs) Armstrong NSS #2579  
December 21, 1934 to August 29, 2014

Bob Armstrong was undoubtedly one of the pioneers of caving in Indiana. His first venture into the underworld of caves was circa 1948 in Sunken Pit Cave located in McCormack's Creek state Park near the town of Spencer, Indiana. That was while he was in high school at Clayton, Indiana. Five years later he had teamed up with Jack Derry while they were studying electrical engineering at Rose Polytechnic Institute (now Rose Hulman Institute of Technology). Bob and Jack were part of the group that dug through "Why-the-Hell-Squeeze" in Wayne Cave, and that effort soon led to major discoveries including the RPI Extension with its moon milk, high domes, and formation filled rooms. Some of his cave adventures during the 1950's were in the Doghill-Donnehue Cave System, Sullivan Cave, Buckner Cave, and Carroll Cave in Missouri where he and Jack Derry spent a couple of days trapped in a high room by flood waters. Bob's greatest cave dig was the 115 foot hand dug tunnel in Sullivan Cave. His attempt to find more passage following a mud filled passage bears the name Armstrong's Folly. The effort included at least four weekend camps in the cave. Another cave dig was in Buckner Cave where Richard Powell surmised there must be more passage after studying a hand drawn map from the Clyde Malott Collection. Bob, Dick Powell, and Jim Langhammer went to Buckner Cave in 1958 with hopes of finding more passage. Bob rolled and hurled rocks from the terminal breakdown in the entrance room, while Powell and Langhammer quietly dug a few feet in a filled crawlway for a half hour and discovered the route to most of the three mile long system. Bob felt a bit cheated out of the discovery but soon got over it. During the 1960's Bob was mentor to dozens of Boy Scouts and numerous young cavers through leading by example and providing transportation on cave trips. He often arrived home hours after caving due to dropping young cavers at their doorstep.

Upon graduating from Rose in 1954, Bob was employed with the jet engine lab at the Allison Division of General Motors in Indianapolis. A layoff ended that job in only a couple of years. Soon he had a brief military stint in its critical skills program and was employed at Naval Avionics Facil-



photo courtesy Marie-Susanne Langille, 2000

ity in Indianapolis where he spent the majority of his working life. He was well established in the field of developing testing instruments for evaluating and repair of military equipment that dated from World War II, to the Walleye guided bomb program and Polaris Missiles.

By 1958 "Bugs" had acquired his first ambulance/hearse which was a 1946 Cadillac. He and Jack Derry still caved together and made a couple of long westward trips in the ambulance to the Badlands, Bryce Canyon, and Canyon Lands National Parks. In 1959, Bob and co-worker Robert Letsinger bought a house at 3101 Washington Boulevard in Indianapolis. It became city famous when Bob acquired a World War I field piece to place in the yard. Soon there was also a 1949 Cadillac and a 1940 LaSalle hearse lending character to the home site. The "Bug House" became home for an assortment of cavers who lent a hand in keeping up the house and hung out exchanging a wonderful assortment of social and technical ideas.

When the Soil Conservation Service was planning flood control dams and a recreational lake on the surface stream section of the Lost River System in Orange County, Indiana, Bob stepped up to join the opposition and helped demonstrate the futility

*Continued on page 17...*



# Dig Unearths More Ice Age Bones

by Alan Stewart

“This is being held for the first time in 40,000 years, probably,” Ron L. Richards said as he lifted a mud-covered, right humerus from the skeleton of an adult peccary Friday during a three-day dig at Indiana Caverns located southwest of Corydon.

Working in partnership with Indiana Caverns, Richards, the Indiana State Museum’s senior curator of paleobiology, was joined by several other workers and volunteers last week in the unearthing of the pig-like flat-headed peccary. The bones were mapped out in regard to how they were laying and where in an area that was about six feet by eight feet and about a foot deep and then tagged before being packed away so they could be taken to the Indiana State Museum for further research and carbon dating.

“We all want to preserve and exhibit and study the Ice Age, so we have something in common,” Richards said of the partnership with Indiana Caverns, which is a

part of the Binkley Cave system, Indiana’s longest cave and eighth longest cave in the country.

The dig site was chosen because of its proximity to a public viewing location only 30 feet away and because workers could screen the abundantly sticky mud from bones and conversely screen smaller bones from the mud.

Dozens of schoolchildren from Salem visited the site Friday and several asked questions as they gazed at the mound of bones and peccary teeth laying in the screen area.

“That’s one of the most exciting things about this process,” Rob Houchens, an Indiana Caverns partner, said as he held a different humerus. “The kids ask questions and get interested. I enjoy seeing that kind of excitement.”

Richards said he’s enjoyed the dig, which was funded by Deborah and Randy Patrick of Indianapolis, so far. He said the cave is one of the largest and best preserved deposits of Ice Age

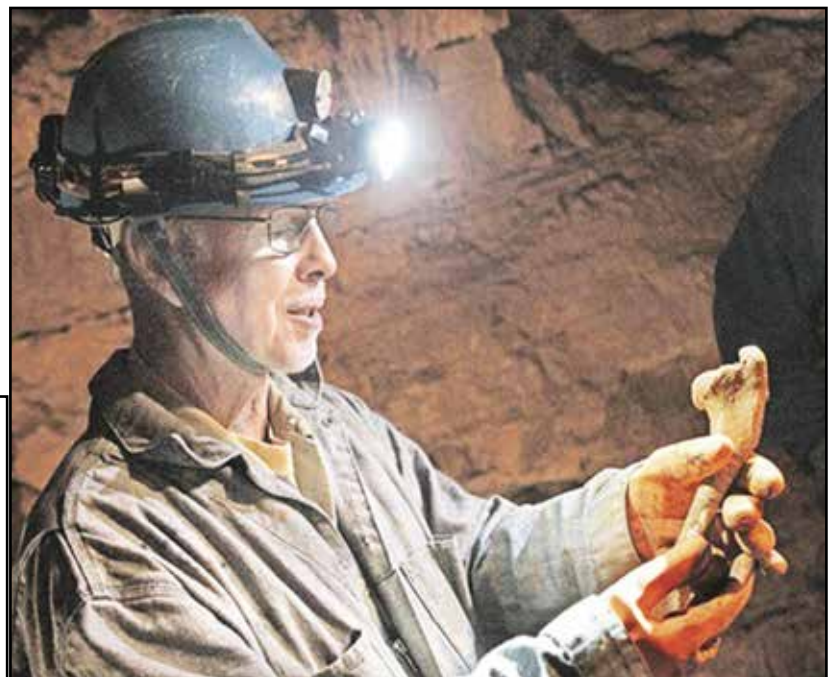
bones yet discovered in Indiana.

“Normally, you have to dig for things or find things in a washout. But I counted 11 peccaries throughout the cave – exposed – and that’s almost unheard of. There have to be hundreds more that are buried. This is very unusual. It’s like I’ve walked into an Ice Age graveyard,” Richards said. “There are clusters or pockets of bones in here. We’re not sure how, but the animals either fell in or climbed in and couldn’t get out and then they died in different areas and different positions, with a lot of them in this break-down area of Big Bone Mountain.”

In addition to the passenger pigeon and porcupine, bones from numerous flat-headed peccary, an Ice Age bison, snakes, an Ice Age bear, birds, including a barred owl, beaver, and boreal red-back vole (similar to a mouse) have been discovered.

*Reprinted from the October 8, 2014 online edition of The Corydon Democrat.*

Ron Richards, the Indiana State Museum’s senior curator of paleobiology, holds a humerus from the skeleton of an adult peccary just after it had been found in residual mud Thursday morning as part of a three-day dig at Indiana Caverns show cave southwest of Corydon.



**INDIANA KARST CONSERVANCY TREASURY REPORT**

**Income/Expense Statement  
From July 1, 2014 to September 30, 2014**

**INCOME:**

Dues Apportionment and Residuals	677.50	
Donations - General	141.50	
Donations - Land Acquisition Fund	44.00	
Interest	<u>214.58</u>	
		\$1,077.58

**EXPENSES:**

IKC Update (printing, production, mailing)	315.79	
Education / Outreach	89.33	
Stewardship/Conservation	103.11	
NSS Donation	500.00	
Business (website, meeting, misc fees)	53.97	
Ind Acad Science grant	0.00	
Transfers to/from restricted funds/other adjustments	<u>243.94</u>	
		(\$1,306.14)

**NET OPERATING EXCESS (DEFICIT) THIS PERIOD:** (\$228.56)

**Balance Sheet  
September 30, 2014**

**ASSETS:**

Cash in Checking / Saving Accounts / CDs	135,008.62	
Robinson Ladder Cave Preserve (73.48 acres)	162,000.00	
Shawnee Karst Preserve (50.31 acres)	105,000.00	
Wayne Cave Preserve (20.00 acres)	75,000.00	
Sullivan Cave Preserve (28.00 acres)	72,000.00	
Buddha Karst Nature Preserve (36.84 acres)	29,000.00	
Orangeville Rise Nature Preserve (3.01 acres)	7,000.00	
Indian Creek Conservation Easement (valued at \$1/acre)	<u>13.16</u>	
		<u><u>\$585,021.78</u></u>

**FUNDS & OPERATING EXCESS:**

Land Acquisition Restricted Fund	29,954.95	
Deferred Dues Restricted Fund (180 members)	3,510.00	
Indiana Acad of Science	796.40	
Stewardship Endowment Restricted Fund	53,875.09	
Previous General Fund (total)	47,113.90	
Net Excess (Deficit) This Period	<u>-228.56</u>	
Current General Fund (unrestricted)	46,885.34	
Current General Fund (committed)	4,100.00	
Real estate liquidity (basis value)	<u>450,000.00</u>	

**Total Liabilities & Operating Excess** \$585,021.78



## IKC EXECUTIVE BOARD MEETING MINUTES

Saturday, September 13, 2014 3:00 PM EDT – Milltown, Indiana

### Board Members Present:

Jerry Lewis, President  
 Kevin Smith, Secretary  
 Keith Dunlap, Treasurer  
 Bruce Bowman (proxied by Sue Vernier)  
 Christopher Dick  
 Everett Pulliam  
 Bob Sergesketter  
 Tom Sollman  
 Carla Striegel-Winner  
 Bob Vandeventer  
 Richard Vernier  
 Jamie Winner

### Board Members Absent:

Dave Haun  
 Bruce Silvers  
 Karen Silvers

The meeting was called to order by President Jerry Lewis at 3:00 PM at Kevin Smith's property on the Blue River in Milltown, Indiana.

Minutes of the previous quarterly meeting were accepted as published in the September 2014 *IKC Update*.

### E-Mail Motions

None to report.

### Treasurer's Report

Treasurer Dunlap reported cash assets totaling \$134,906.03 and land assets totaling \$450,000.00 for total assets of \$584,906.03. Funds include Stewardship: \$53,675.15; Deferred Dues: \$4050.00; Land Acquisition: \$29,930.95; General Fund: \$46,453.53; ad hoc Science Fund: \$796.40.

IKC membership currently stands at 190. Twelve members did not renew their membership and will be dropped.

### Shawnee Karst Preserve

President Lewis reports that an Open House event will be held at the Shawnee Karst Preserve in conjunction with The Nature Conservancy on October 31st. The initial purchase of the SKP property was split 50/50 between the IKC and TNC. This event will provide TNC employees an opportunity to tour the cave and the property. Jerry Lewis and Alan Purcell have arranged for possibly three different trips. A through-trip from the SKP entrance to the boat dock entrance in Spring Mill State Park has been arranged for the more hearty cavers, a shorter trip into and out of the cave using the SKP entrance, and a brief trip down to the river just inside the SKP entrance.

Dunlap reports he is still working on devising a means to secure the stream level dataloggers to a concrete block that will be submerged in the stream.

Lewis reports that the tree that had fallen over and damaged the foot bridge earlier in the year was successfully cut away from the bridge, and the bridge was repaired.

With the nature trail completed within the preserve, and twenty cedar posts installed that demarcate the number of each of the "points of interest" along the trail, Lewis proposes a new bat-themed kiosk that could serve as a holder for trail guide brochures. Lewis suggested that he may also create a sign board showing the layout of the trails within the preserve using a wood router. Lewis moved for the IKC to provide funding of \$100 for materials to build the kiosk. The motion was seconded by Richard Vernier. Motion passed with a unanimous vote.

### Indian Creek Conservation Easement

Jamie Winner reports that he had conducted a follow-up visit to the properties along the Indian Creek Conservation Easement. In general, the mowing practices that were in violation did show some improvement since the July inspection. Winner reports that there is a new owner of the property that had previously had a picnic shelter built over the easement boundary. Jaime reports the new owner is aware of the easement rules and boundaries.

Winner also reports that several covers for the boundary post markers have suspiciously come off or were missing and suggests a more secure method of installing the post covers.

It was also noted that the property that cavers have been using for parking and access to the Blowing Hole entrance has also come under new ownership. This property does not include the Blowing Hole entrance but affords the easiest access. So far the new owners seem amicable towards cavers.

### Wayne Cave Preserve

Some pictures were passed around showing the progress on the new kiosk shelter that Tom and Robert Sollman are building for the preserve. The foundations for the four corner posts for the shelter are in the process of being poured and the off-site construction of the structure's roof assembly is nearing completion. IKC member, Fig Newton, provided the cedar lumber for the structure at his cost.

Keith Dunlap reports his intent to donate to the IKC, his 11.85 acre property adjacent to the existing Wayne Cave Preserve property. The proposal assumes the IKC will pay for any costs associated with completing the property transfer. Dunlap's property is surveyed, wooded, and is



enrolled in the Classified Forest program. The property also has an InDOT mitigation easement, and requires an appraisal to assess its current value. The tract of land is expected to be valued at no more than \$10,000 because of the easement restrictions. Dunlap noted that certain recreational activities are allowed on the property including hunting and hiking. Trail construction is allowed, however removal of any trees larger than 3 inches (trunk diameter) is prohibited. Dunlap intends to take a tax deduction for the value of the donated property. Transfer costs should not exceed \$1000 and include costs for title search, deed preparation, and recording fees. Title insurance, if desired, would cost another \$100 to \$200. Additionally, an appropriate contribution to the IKC's Stewardship Fund from the General Fund should be considered (perhaps 10% of the appraised value). Long term costs include the additional cost of invasive control, property taxes (currently \$5 per year), and liability insurance (currently \$8 per year). The DNR Classified Forest classification requires annual reporting and on-site inspections every five years. It is unclear what the mitigation easement inspection process entails. Dunlap provided a "Wayne Cave Preserve Expansion Proposal" hand-out to the meeting attendees that provided additional details.

Ensuing discussion points included questions regarding details of the easement inspection process and what agency would conduct the inspections.

A motion was made by Jerry Lewis to:

- a) Accept the land donation from Keith Dunlap on behalf of the IKC, and
- b) Approve up to \$1500 from the IKCs General Fund to cover costs associated with the property transfer.

The motion was seconded by Everett Pulliam. The motion carried with a vote of 11 to 0 and 1 abstention. Jerry Lewis agreed to take the lead in arranging for the transfer of the property by the end of the year. Dunlap agreed to arrange and pay for an appraisal of the property. Finally, it was noted that the Wayne Cave Preserve Management Plan would need to be updated to account for the expansion property.

### **Buddha Cave Preserve**

Keith Dunlap reports that during a recent visit to the property, he was approached by Steve Backs (DNR Wildlife Research Biologist) regarding sightings of wild boars on adjacent properties and whether the IKC would consider the trapping of boars on the Buddha property. Backs suggested the IKC consider pursuing an agreement with a trapper that has already been hired by the USDA to hunt wild boars on other properties. There was some discussion around the methods used to hunt the boars (e.g., helicopter), the timing for the hunts, and general safety concerns. Dunlap noted that the Buddha Cave Preserve's Management Plan does include provisions to allow for the hunting for "wildlife

management". Dunlap will follow-up with Backs to obtain additional details before any decisions are made.

### **Robinson Ladder Cave Preserve**

Carla Striegel-Winner presented the following four options for future management of the prairie resources on the property. The options are listed in order of least to most, based on cost and time intensity.

- 1) Allow vegetation succession with little intervention.

Pros – Cheap, easy

Cons – Non-native creep in, ensuring the property meets guidelines for the classified forest/wildlife program, some cost for non-native spraying, etc.

- 2) Bush-hog vegetation on a 3 to 5 year basis.

Pros – Allows for an early successional habitat for more wild life species diversity

Cons – Time and expense of bush-hogging

- 3) Plant trees.

Pros – Increases forest land.

Cons – Time and expense-intensive

- 4) Plant native grasses.

Pros – Species diversity (plant and wildlife)

Cons – Time and expense-intensive

Bob Vandeventer suggested that the preserve's Management Plan consider bat habitat including the creation of corridors that attract bats for summer foraging. Other suggestions included letting the upper field go and maintaining only the lower field as a prairie.

Lewis reports that he was contacted by Ellen Jacquart, TNC stewardship co-manager, who suggested that the IKC not pursue development/management of the land as a prairie. She indicated prairie conversions are difficult and sometimes disappointing unless there is strong evidence the land was previously a prairie.

It had been suggested by Alan Purcell that we try a herbicide called Plateau which is purported to do well in eradicating weeds and allowing native grasses to grow.

Carla agreed to follow up with Purcell and finalize a strategy for the future management of the prairies on the preserve.

### **Land Acquisition**

No new land acquisition activities to report.

### **Education and Outreach Report**

Keith Dunlap reports a draft proposal for the IKC to conduct historical walking tours in Wyandotte Cave is close to completion and will be sent out to the Board Members for review/comments. Dunlap reports he had met with Lloyd Arnold to discuss the highlights of the



proposal. Arnold is the State Representative for District 74 (containing Wyandotte Cave) and has been pressuring the DNR to reopen the cave for economic development reasons. He is supportive of our efforts to reopen Wyandotte Cave for limited public tours and our proposal is in-line with his desires and expectations. Discussion points among the Board included the number of tours to be offered and how the tours would be staffed, liability issues, suitability of the cave to tours, funding for necessary cave repairs/supplies, and the fate of the current visitor's center. Dunlap stated he plans to set up a meeting with John Davis, DNR Deputy Director with the land management divisions of the Indiana DNR, to discuss the proposal. It is unsure how the proposal will be perceived and even if the DNR is supportive, the proposal may not be economically or logistically feasible.

**Items From the Floor**

Jerry Lewis reports that he has become aware of the new Forest Supervisor for the Hoosier National Forest.

Lewis will try to open a dialogue with the new Supervisor regarding the IKC and current/future policies for caves on public land.

Dunlap reports that he has received five pins to go along with the five engraved bricks the IKC purchased and donated in support of the new NSS headquarters recapitalization project. The bricks were purchased in the memory of Terry Clark and the five pins will be given to Jenny Clark, Terry's wife.

**Next Meeting**

The next quarterly meeting was scheduled for December 13th, 11:00 AM at the Geology building on the IU Bloomington campus [venue later changed to the Monroe County Public Library in Bloomington].

**Adjourn**

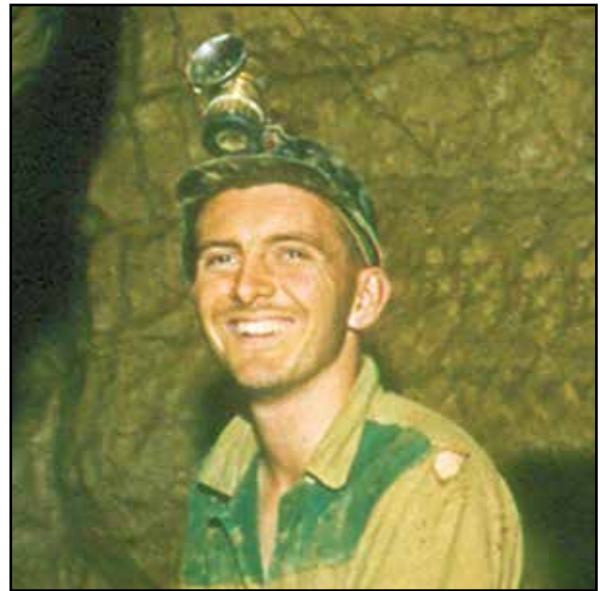
Meeting adjourned at 5:02 PM.

Respectfully submitted, Kevin Smith, IKC Secretary.

*Continued from page 12...*

of controlling this large system of karst features. When the project was re-introduced in the 1990's Bob became head of the Lost River Conservation Task Force and, for twenty years, attended events and meetings promoting the preservation of the Lost River. He ran tours of Lost River until 2011 when failing health forced him to step aside.

Bob was a registered Professional Engineer and member of the National Speleological Society, the Indianapolis Geology and Gem Society, and the NRA, to name only a few of the organizations he supported. He was Vice President of Bluespring Caverns Inc. Bob was an ardent numismatist and in his own words, "collector of collections". He is sorely missed by a lot of friends and will be for a long time to come.



*photo courtesy Don Martin, circa 1959*

**INDIANA KARST CONSERVANCY, PO BOX 2401, INDIANAPOLIS, IN 46206-2401**

I would like to help the IKC protect Indiana's unique caves and other karst features. Enclosed is:

\$ \_\_\_\_\_ for IKC membership dues at \$15 per year (dues expire March 31st of each year, please pro-rate @ \$1.25/month).

\$ \_\_\_\_\_ donation to the general IKC fund.

\$ \_\_\_\_\_ donation restricted to a specific IKC project. Please specify: \_\_\_\_\_

\_\_\_\_\_ I know of an area worthy of protection. Please contact me.

\_\_\_\_\_ I would like to volunteer to help. Please contact me.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

PHONE # \_\_\_\_\_

Make checks payable to the Indiana Karst Conservancy, Inc. and mail to the IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapolis, IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organization with membership dues and donations fully tax deductible.



